(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/053970 A1

(51) International Patent Classification[7]: H01L 21/312, 21/3105, G03F 7/00, 7/42, G02F 1/136, B08B 11/00, 3/10, 7/04, C23G 5/00

(21) International Application Number:
PCT/KR2003/002660

(22) International Filing Date: 5 December 2003 (05.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2002-0078016
9 December 2002 (09.12.2002) KR

(71) Applicant *(for all designated States except US)*: **SAMSUNG ELECTRONICS CO., LTD.** [KR/KR]; 416, Maetan-dong, Yeongtong-gu, Suwon-si, 442-742 Gyeonggi-do (KR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **SONG, Keun-Kyu** [KR/KR]; 7-1 Nongseo-ri, Giheung-eup, Yongin-si, 449-901 Gyeonggi-do (KR). **ROH, Nam-Seok** [KR/KR]; 607-703 Hyojachon Hwaseong Apt., Seodang-dong, Bundang-gu, Seongnam-si, 463-055 Gyeonggi-do (KR). **HONG, Mun-Pyo** [KR/KR]; 112-205 Hansolmaeul Cheonggu Apt., Jeongja-dong, Bundang-gu, Seongnam-si, 463-010 Gyeonggi-do (KR).

(74) Agent: **PARK, Young-Woo**; 5F., Seil Building, #727-13, Yoksam-dong, Gangnam-gu, 135-921 Seoul (KR).

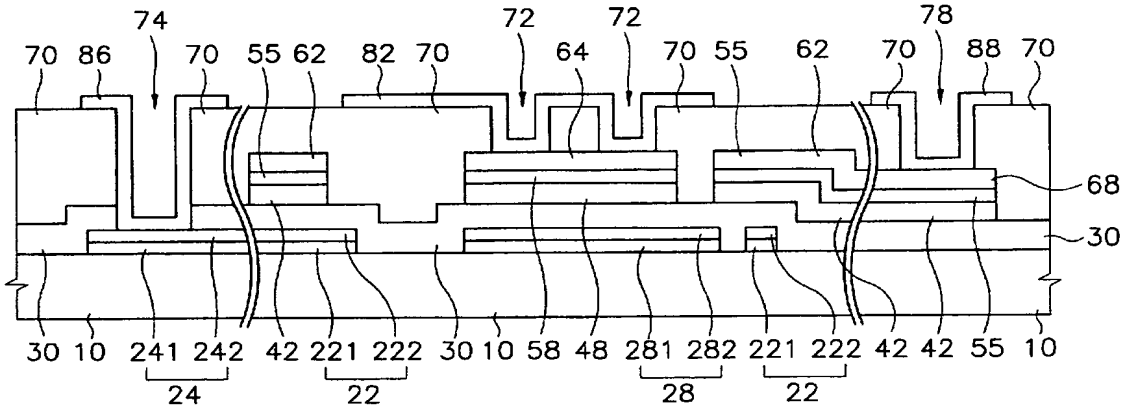
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: STRIPPING COMPOSITION FOR REMOVING A PHOTORESIST AND METHOD OF MANUFACTURING TFT SUBSTRATE FOR A LIQUID CRYSTAL DISPLAY DEVICE USING THE SAME



(57) Abstract: In a stripping composition for easily removing a photoresist without an adverse effect and a method of manufacturing a TFT substrate for an LCD device using the same, the stripping composition includes acetic acid and ozone gas contained in the acetic acid as a bubble form to remove the photoresist including novolak. A photoresist pattern including novolak is formed on a predetermined layer (24) formed on a substrate (10). The layer is etched using the photoresist pattern as a mask to form a pattern of the layer. The photoresist pattern is removed using the stripping composition. The stripping composition is cheap and more effectively protects the environment in comparison with the conventional stripping compositions. Additionally, an O_2 ashing process performed before or after a stripping process may be omitted to thereby simplify a stripping process.

WO 2004/053970 A1